CLAIMS

1. A method for manufacturing a tube for use in an aluminum heat exchanger, the method comprising the steps of:

preparing an aluminum flat tube core;

forming a sprayed layer on a surface of the tube core by thermally spraying alloy containing Cu (including its alloy) and Zn (including its alloy), or an alloy containing Cu and Zn, wherein the sprayed layer contains Cu and Zn and Si content is 2 mass% or less.

2. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in claim 1, wherein a Cu adhesion amount of the sprayed layer is adjusted to 1 to 10 g/m^2.

3. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in claim 1 or 2, wherein a Zn adhesion amount of the sprayed layer is adjusted to 1 to 20 g/m^2.

4. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 3, wherein an average thickness of the sprayed layer is adjusted to 0.4 to 50 μm.

5. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 4, wherein the tube core is constituted by aluminum alloy material in which a Cu

content is 0.05 mass% or less.

6. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 5, wherein the tube core is constituted by Al-Mn series alloy.

7. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 6, wherein the tube core is constituted by JIS 3003 alloy.

8. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 7, wherein the tube core is formed by extrusion.

9. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 and 8, wherein the thermal spraying processing is performed by arc thermal spraying.

10. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 9, wherein the thermal spraying processing is performed by thermally spraying Al-Cu-Zn series alloy.

11. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 9, wherein the thermal spraying processing is performed by thermally spraying Cu-Zn

alloy.

12. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 9, wherein the thermal spraying processing includes Cu thermal spraying processing for thermally spraying Cu alloy and Zn thermal spraying processing for thermally spraying Zn.

13. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in claim 12, wherein the Cu thermal spraying processing and the Zn thermal spraying processing are performed simultaneously.

14. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in claim 12, wherein the Cu thermal spraying processing and the Zn thermal spraying processing are performed at different time points.

15. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 12 to 14, wherein the thermal spraying processing is performed by thermally spraying Cu alloy and Zn by generating arc using a Cu alloy wire and a Zn wire.

16. The method for manufacturing a tube for use in an aluminum heat exchanger as recited in any one of claims 1 to 15, wherein the thermal spraying processing is performed in inert gas atmosphere

17. A tube for use in an aluminum heat exchanger, wherein the tube is manufactured by the method as recited in any one of claims 1 to 16.

18. An aluminum heat exchanger in which an aluminum tube for use in a heat exchanger tube and a fin are brazed in a combined state, wherein the tube is constituted by the tube for use in an aluminum heat exchanger manufactured by the method as recited in any one of claims 1 to 16.

19. The aluminum heat exchanger as recited in 18, wherein the tube for use in a heat exchanger comprises a Cu diffusion layer for pressure resistance and heat resistance and a Zn diffusion layer for sacrifice corrosion.

20. The aluminum heat exchanger as recited in 19, wherein the Cu diffusion layer is formed in the Zn diffusion layer.

21. A refrigeration cycle in which refrigerant compressed by a compressor is condensed by a condenser, the condensed refrigerant is decompressed by a decompression device, the decompressed refrigerant is evaporated by an evaporator and then returned to the compressor,

wherein the condenser is constituted by the aluminum heat exchanger as recited in any one of claims 18 to 20.

22. A car air-conditioning device provided with the refrigeration cycle as recited in claim 21.